

**STABLE HIGH TEMPERATURE SENSOR SYSTEM WITH
TUNGSTEN ON AlN**

ABSTRACT OF THE DISCLOSURE

A sensor system has an AlN substrate, a W layer on the substrate, a signal source adapted to apply an electrical actuating signal to the W layer, and a sensor adapted to sense the response of the W layer. The W layer can comprise a thin film, with various types of optional protective layers over the film. Applications include sensing temperature, fluid flow rates, fluid levels, pressure and chemical environments. For a planar heater, the W layer comprises a plurality of conductive strands distributed on the substrate, with the strands generally parallel and serpentine shaped for a rectangular substrate, and extending along respective lines of longitude that merge at opposite poles of the substrate for a circular substrate.